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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,397	08/04/2006	Yasuhiro Yamasaki	Q95210	3865

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SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

RECEK, JASON D

ART UNIT	PAPER NUMBER
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2442

NOTIFICATION DATE	DELIVERY MODE
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10/07/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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sughrue@sughrue.com
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Office Action Summary	Application No. 10/581,397	Applicant(s) YAMASAKI, YASUHIRO	
	Examiner JASON RECEK	Art Unit 2442	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 1-3,5-9,11-13,15-19,21-23 and 25-29 is/are pending in the application.
- 5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1-3,5-9,11-13,15-19,21-23 and 25-29 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

This is in response to the RCE filed on August 26th 2011.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/26/11 has been entered.

Status of Claims

Claims 1-3, 5-9, 11-13, 15-19, 21-23 and 25-29 are currently pending.

Response to Arguments

2. Applicant's arguments, see pg. 15-17, with respect to the rejection(s) of claim(s) 1, 11 and 21 under 103(a) have been fully considered and are persuasive. Specifically, applicant's argument that Aweya teaches "a function" and therefore does not disclose a plurality of functions each of which are set for respective ranges, as now recited by the claims is persuasive. Therefore, the rejection has been withdrawn. However, upon

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further consideration, a new ground(s) of rejection is made in view of Park US
2004/0120256 A1.

Applicant's arguments regarding claims 2, 12 and 22 (pg. 17-18) have been fully considered but are not persuasive. Applicant asserts that Aweya and Sillasto does not disclose "judging whether a transmission amount is reduced..." or "determining a transmissive amount based on this judgment". To support this assertion applicant states that Aweya merely teaches a drop/mark probability but is silent with regard to amount of data transmitted. This is not persuasive. Aweya explicitly contemplates the nature of an acknowledgement protocol and teaches that transmission will be reduced in certain scenarios (col. 1 ln. 55 - col. 2 ln. 5, col. 3 ln. 35-49). Thus, Aweya teaches or suggests "judging whether a transmission amount is reduced...". As for determining the transmissive amount, Aweya teaches the transmission rate will increase or decrease (col. 4 ln. 55-60). Thus Aweya determines "an amount" greater than or less than the current amount of data transmitted.

Applicant's arguments (pg. 18-19) regarding claims 3, 13, 23 and the other dependent claims are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1, 5-6, 11, 15-16, 21 and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aweya et al. US 6,690,645 B1 in view of Sisto et al. US 2008/0212965 A1 and Park US 2004/0120256 A1.

Regarding claim 1, Aweya teaches “monitoring data amount within a data storing unit” monitoring queue occupancy (col. 2 ln. 35-42);

“setting a plurality of thresholds for the empty data amount” as setting desired queue occupancy (col. 5 ln. 15-30);

“calculating a receivable amount” generating an inter-drop/mark value which represents a number of packets (receivable amount) to be accepted into the queue (col. 3 ln. 5-10, col. 10 ln. 18-23); and

“informing the data transmission terminal of the receivable amount” marked packets are sent back thus informing sender of receivable amount (col. 10 ln. 30-44).

Aweya does not explicitly disclose “receivable amount comprises smaller than the empty data amount being calculated from the data amount” however this is disclosed by Sisto as calculating available buffer space by first reducing unfilled space (empty amount) by the amount of outstanding data, thereby resulting in an amount smaller than the empty amount (paragraph 23). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Aweya with the teaching of Sisto for the purpose of controlling a queue. Aweya itself teaches that it is

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advantageous to stabilize queue occupancy levels by controlling the amount of data transmitted to the queue (col. 2 ln. 35-48).

The combination of Aweya and Sisto does not explicitly disclose calculating the receivable amount "by using a plurality of functions each of which are set for respective ranges of said plurality of thresholds" however this is taught by Park as determining transmission as a range between thresholds (paragraphs 28, 52, 56 and 74-77).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Aweya and Sisto with the threshold ranges taught by Park for the purpose of improving transmissions. Park suggests this allows for more efficient data communication (paragraph 14).

Regarding claim 5, Aweya discloses "setting a plurality of thresholds for the empty data amount" as setting desired queue occupancy (col. 5 ln. 15-30), and "determining the receivable amount with respect to respective ranges being determined by the thresholds" marking/dropping packets according to threshold values (col. 5 ln. 43-67, col. 10 ln. 53 – col. 11 ln. 13), and "the receivable amount is proportional to a value being calculated by dividing the empty data amount by a positive number" occupancy (receivable amount) is determined by dividing capacity by a positive number (col. 5 ln. 20-25).

Regarding claim 6, Aweya discloses “setting a plurality of thresholds for the empty data amount” generate threshold (col. 8 ln. 52-54), “calculating the receivable amount with a plurality of functions each of which are set with respect to respective ranges being determined by the thresholds” marking/dropping packets according to functions (col. 5 ln. 43-67, col. 10 ln. 53 – col. 11 ln. 13), and “the functions decrease the receivable amount according to a decrease in the empty data amount” function changes according to queue occupancy (col. 8 ln. 30-40).

Regarding claims 11 and 15-16, they are apparatuses that correspond to the methods of claims 1 and 5-6 respectively, therefore they are rejected for similar reasons.

Regarding claims 21 and 25-26, they are mediums that corresponds to the methods of claims 1 and 5-6 respectively, therefore they are rejected for similar reasons.

5. Claims 2, 7-9, 12, 17-19, 22 and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aweya in view of Sillasto et al. US 2005/0063304 A1.

Regarding claim 2, Aweya discloses “judging whether a transmission amount is reduced or not, based on the time and a network situation relating to throughput for a

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data transmission” as monitoring queue occupancy over a time interval and determining congestion (col. 2 ln. 49-53, col. 6 ln. 48-62), and

“determining a transmissive amount based on the judgment” determining amount of data allowable and possibly reducing transmission rate (col. 5 ln. 4-67).

Aweya does not explicitly disclose “measuring time while a data storing unit is empty” however this is taught by Sillasto as an inactivity timer that measures when a buffer is empty (paragraph 47). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Aweya with the timer taught by Sillasto for the purpose of controlling a buffer. Aweya itself suggests using time periods to control buffer flows (col. 6 ln. 48-62).

Regarding claim 7, Aweya discloses “judging whether the transmissive amount is reduced or not based on the time and network situation” control transmission rate according to queue occupancy which is dependent on time and congestion (col. 12 ln. 35-41, Fig. 9),

Aweya does not explicitly disclose “network situation includes information for specifying at least one of a user, an application, or priority of data” or “information for specifying the application comprises port number of TCP” however this is taught by Sillasto as identifying an application by port number (paragraph 31). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a port number to identify an application, this is merely the combination of known elements according to their established function in order to yield a predictable result.

Regarding claim 8, Aweya discloses “judging whether the transmissive amount is initialized or not based on the network situation when the data storing unit continues to be empty for a predetermined period” as initializing settings to zero (col. 8 ln. 1-15).

Regarding claim 9, it is a combination of claims 7 and 8, therefore it is rejected for similar reasons.

Regarding claims 12 and 17-19, they are apparatuses that correspond to claims 2 and 7-9 respectively, therefore they are rejected for similar reasons.

Regarding claims 22 and 27-29, they are mediums that corresponds to claims 2 and 7-9 respectively, therefore they are rejected for similar reasons.

6. Claims 3, 5-9, 13, 15-19, 23 and 25-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Aweya, Sisto and Park in view of Sillasto.

Regarding claim 3, it corresponds to claims 1 and 2 as indicated by applicant (pg. 25 of response dated 4/27/10); thus the corresponding parts are rejected for similar reasons. It would have been obvious to one of ordinary skill in the art to modify the combination of Aweya, Sisto and Park with the timer taught by Sillasto for the purpose

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of controlling a buffer. Aweya itself suggests using time periods to control buffer flows (col. 6 ln. 48-62).

Regarding claims 5-9, they are rejected for the same reasons given previously.

Regarding claims 13 and 15-19, they are directed towards an apparatus which corresponds to the method of claims 3 and 5-9. Therefore, they are rejected for similar reasons.

Regarding claim 23 and 25-29, they are directed towards a medium which corresponds to the method of claims 3 and 5-9. Therefore, they are rejected for similar reasons.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON RECEK whose telephone number is (571)270-1975. The examiner can normally be reached on Mon - Fri 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached on (571) 272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason Recek/
Examiner, Art Unit 2442

(571) 270-1975